

Claim Amendments

Please amend the claims as follows:

1. (Currently Amended)

A An at least partly cold-formed bearing ring ~~{2, 21}~~ of a wheel bearing unit ~~{1}~~, ~~which bearing ring is cold-formed in one part and in this case~~

- wherein the bearing ring is designed hollow-cylindrically about an axis of rotation ~~{1a, 21a}~~ of the wheel bearing unit ~~{1}~~, comprising
- ~~has~~ at least two raceways ~~{10, 11}~~ for rolling bodies ~~{5}~~,
- ~~is provided at least with~~ a flange ~~{18, 22}~~ emanating radially with respect to the axis of rotation ~~{1a, 21a}~~,
- ~~has~~ a rim ~~{2a, 23}~~, the rim ~~{2a, 23}~~ running axially about the axis of rotation ~~{1a, 21a}~~ between the raceways ~~{10, 11}~~ and projecting radially out of the bearing ring ~~{2, 21}~~ between the raceways ~~{10, 11}~~, and
- ~~has~~ an annular groove ~~{16, 26}~~ that is curvilinear in profile as viewed along a plane that contains the axis of rotation, wherein the annular groove acts as a stress relief notch, the annular groove ~~{16, 26}~~ adjoining the rim ~~{2a, 23}~~ radially on a circumferential side of the bearing ring ~~{2, 21}~~ ~~which faces facing~~ away from the raceways ~~{10, 11}~~, and the annular groove ~~{16, 26}~~ extending, radially codirectionally with the rim ~~{2a, 23}~~, at least partially radially into the bearing ring ~~{2, 21}~~.

2. (Currently Amended)

The bearing ring as claimed in claim 1, which is contracted radially inward in the direction of the axis of rotation ~~{1a, 21a}~~ with respect to the rim ~~{2a, 23}~~.

2. (Currently Amended)

The bearing ring as claimed in claim 1, which is contracted radially inward in the direction of the axis of rotation ~~(1a, 21a)~~ with respect to the rim ~~(2a, 23)~~.

3. (Currently Amended)

The bearing ring as claimed in claim 1, in which the rim ~~(2a, 23)~~, starting from a radially ~~lowest~~ innermost point in the annular groove ~~(16, 26)~~, is radially thicker than the ~~initial material of uniform thickness flange~~.

4. (Cancelled)

5. (currently amended) ~~The bearing ring as claimed in claim 4, in which the rim (2a, 23), starting from a radially lowest point in the annular groove (16, 26), is radially thicker than the radially greatest wall thicknesses of the portions (20, 24, 25)~~

An at least partly cold-formed bearing ring of a wheel bearing unit,

- wherein the bearing ring is designed hollow-cylindrically about an axis of rotation of the wheel bearing unit, comprising
 - at least two raceways for rolling bodies,
 - a flange emanating radially with respect to the axis of rotation,
 - a rim, the rim running axially about the axis of rotation between the raceways and projecting radially out of the bearing ring between the raceways, and
 - an annular groove, the annular groove adjoining the rim radially on a circumferential side of the bearing ring facing away from the raceways, and the annular groove extending, radially codirectionally with the rim, at least partially radially into the bearing ring;
- wherein the bearing ring merges axially on both sides of the rim into hollow cylindrical portions, in each case one of the portions adjoining one of the

raceways in each case on both sides of the rim, and wherein the rim, starting from a radially lowest point in the annular groove, is radially thicker than the radially greatest wall thickness of the hollow cylindrical portions.

6. (Currently Amended)

The bearing ring as claimed in claim 1, in which the rim ~~{2a, 23}~~ has between the raceways ~~{10, 11}~~ a cylindrical outer surface area ~~{17, 23a}~~ pointing in the radial direction.

7. (Currently Amended)

The bearing ring as claimed in claim 6, which merges axially on both sides of the rim ~~{2a, 23}~~ into hollow-cylindrical portions ~~{20, 24, 25}~~, in each case one of the portions ~~{24, 25}~~ adjoining in each case one of the raceways ~~{10, 11}~~ on both sides of the rim ~~{2a, 23}~~, and the radially greatest wall thicknesses of the portions ~~{20, 24, 25}~~ being lower than the smallest radial distance between the cylindrical outer surface area ~~{17, 23a}~~ and a radially lowest point in the annular groove ~~{16, 26}~~.

8. (Currently Amended)

The bearing ring as claimed in claim 1, in which the rim ~~{2a, 23}~~ has in each case a shoulder for each of the raceways ~~{10, 11}~~.

9. (Currently Amended)

The bearing ring as claimed in claim 8, in which the raceways ~~{10, 11}~~ are formed at least partially on the rim ~~{2a, 23}~~.

10. (Currently Amended)

The bearing ring as claimed in claim 8, in which the rim ~~{2a, 23}~~ projects out of the bearing ring ~~{2, 21}~~ radially beyond the raceways ~~{10, 11}~~.

11. (Currently Amended)

The bearing ring as claimed in claim 10, with imaginary contact lines which run through the raceways ~~(10, 11)~~ and which at least partially penetrate an imaginary plane pierced perpendicularly by the axis of rotation ~~(1a, 21a)~~, the contact lines being inclined at an acute pressure angle to the plane, and in this case the plane running through the annular groove ~~(16, 26)~~.

12. (Currently Amended)

The bearing ring as claimed in claim 11, which merges axially on both sides of the rim ~~(2a, 23)~~ into hollow-cylindrical portions ~~(20, 24, 25)~~ and, in this case, in each case one of the portions ~~(24, 25)~~ adjoining in each case one of the raceways ~~(10, 11)~~ on both sides of the rim ~~(2a, 23)~~, and the lowest wall thickness of the rim ~~(2a, 23)~~ being greater in the direction of the contact lines than the radially greatest wall thicknesses of the portions ~~(24, 25)~~.

13. (Currently Amended)

The bearing ring as claimed in claim ~~10~~ 11, in which the contact lines penetrate the annular groove ~~(16, 26)~~.

14. (Currently Amended)

The bearing ring as claimed in claim 1, which is of greater thickness ~~has at the thickest point~~, between the annular groove ~~(16, 26)~~ and at least one of the raceways ~~(10, 11)~~, at least an equal thickness to that of the initial material of uniform thickness ~~than it is in adjacent portions of the bearing ring~~.

15. (Currently Amended)

The bearing ring as claimed in claim 1, which has on at least one hollow-cylindrical portion ~~{20, 25}~~ a radial wall thickness which is lower than that of the ~~initial material of uniform thickness flange~~.

16. (Currently Amended)

The bearing ring as claimed in claim 1, ~~which has a~~ in which the flange ~~{18, 22}~~ ~~produced radially in one part with the bearing ring {2, 21} and angled radially outward, the flange {18, 22} being provided with~~ comprises flange holes ~~{18a, 30}~~ arranged so as to be distributed about the axis of rotation ~~{1a, 21a}~~.

17. (Currently Amended)

The bearing ring as claimed in claim 16, in which the flange ~~{22}~~ has an annular planar surface ~~{28}~~ and a projection ~~{29}~~ projecting axially from the flange ~~{22}~~ beyond the planar surface ~~{28}~~ and running around the axis of rotation ~~{1a, 21a}~~.

18. (Currently Amended)

The bearing ring as claimed in claim 17, in which the projection ~~{29}~~ runs radially between the planar surface ~~{28}~~ and the flange holes ~~{30}~~.

19. (Currently Amended)

A wheel bearing ~~{1}~~ with a bearing ring ~~{2}~~ as claimed in claim 1, with two rows of rolling bodies ~~{5}~~, in each case one of the rows being in rolling contact with one of the raceways ~~{10, 11}~~, the wheel bearing unit ~~{1}~~, further, with at least one supporting ring ~~{4}~~, the supporting ring ~~{4}~~ being arranged concentrically to the bearing ring ~~{2}~~ and being in rolling contact with at least one of the rows of rolling bodies ~~{5}~~.

20. (Currently Amended)

The wheel bearing unit ~~(1)~~ as claimed in claim 19, with a flanged ring ~~(3)~~ on which the supporting ring ~~(4)~~ is seated concentrically, the flanged ring ~~(3)~~ having at least one connecting flange ~~(3b)~~ spaced apart axially from the flange ~~(18)~~ and radially codirectional with the flange ~~(18)~~.

21. (Currently Amended)

The wheel bearing unit as claimed in claim 20, which has in the flanged ring ~~(3)~~ a raceway, further to the raceways ~~(10, 11)~~, for rolling contact with one of the rows of rolling bodies ~~(5)~~.

22. (Currently Amended)

The wheel bearing unit as claimed in claim 21, in which the supporting ring ~~(4)~~ is held axially on the flanged ring ~~(3)~~ by means of a crimped rim ~~(3a)~~ cold-angled from the flanged ring ~~(3)~~ and bearing axially against the supporting ring ~~(4)~~.

23. (Currently Amended)

The wheel bearing unit as claimed in claim 19, wherein the bearing ring is elastically deformable and wherein the wheel bearing unit ~~which~~ is play-free at least by means of the at least elastically deformed bearing ring ~~(2)~~.

24. (Currently Amended)

The wheel bearing unit as claimed in claim 23, in which the flange ~~(18)~~ has at least one axial passage hole ~~(18a)~~, a bolt ~~(19)~~ passing axially through the passage hole ~~(18a)~~, and the bearing ring ~~(2)~~ being fixed by means of the bolt ~~(19)~~ axially and in terms of rotation about the axis of rotation ~~(1a)~~.